## DETAILED ACTION

### *Allowable Subject Matter*

1. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to anticipate or make obvious the inventions of claims 1-44 and 56-59, including, *inter-alia*, determining endothelial dependent vasoactivity by recording pressure-related signals and extracting two parameters sensitive to arterial radius, one at the onset of dilation and the second at a later stage of dilation, and using the parameters to determine a characteristic change of the blood vessel's function, which is in turn used to determine the subject's endothelial dependent vasoactivity.

Schnall (US Patent 6939304) discloses a method of determining endothelial dependent vasoactivity from pressure-related signals and their associated parameters, but does not disclose extracting parameters relating to two stages of arterial dilation from the pressure signals.

The prior art of record fails to anticipate or make obvious the method of claims 45 and 48-55, including, *inter-alia*, determining endothelial dependent vasoactivity by applying a stimulus to a vessel, measuring pulse wave velocity in the vessel, determining the subject's autonomic nervous system activity, correlating the PWV and ANS activity in an index, where when the index meets a predetermined value applying a second stimulus to a different blood vessel and measuring its PWV and ANS to determine the subject's endothelial-dependent vasoactivity.

The prior art of record fails to anticipate or make obvious the method of claim 47 including, *inter-alia*, determining endothelial dependent vasoactivity by applying a

stimulus to a vessel, measuring pulse wave velocity in the vessel, determining the subject's autonomic nervous system activity, correlating the PWV and ANS activity in an index, where when the index meets a predetermined value applying a second stimulus to a blood vessel and measuring its PWV and ANS to determine the subject's endothelial-dependent vasoactivity, where the stimuli may be thermal, chemical, electrical, mental stress, or physical exercise.

Sharrock (US Patent 6994675) teaches a method of determining endothelial dependent vasoactivity comprising applying a stimulus to a blood vessel (occlusion), measuring a pulse wave velocity in the vessel (column 2, lines 35-37, determining an autonomic nervous system activity of the subject (column 12, lines 61-67), correlating the pulse wave velocity to the ANS activity to obtain a correlation function having an index (arterial compliance – column 3, lines 62-63), and displaying the indication (figures 9, 10). Sharrock does not disclose applying the second stimulus to an additional blood vessel and repeating the monitoring steps, nor the stimuli being independently selected from thermal, chemical, electrical, mental stress, or physical exercise stimuli.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAREN E. TOTH whose telephone number is (571)272-6824. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on 571-272-4730. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Robert L. Nasser Jr/
Primary Examiner, Art Unit 3735

/K. E. T./
Examiner, Art Unit 3735